NORDAC II DIGITAL COMPUTER TRAINER

NORDAC II is a low-cost, solid-state digital computer trainer specifically designed to teach the basic principles and operations of modern digital computers.

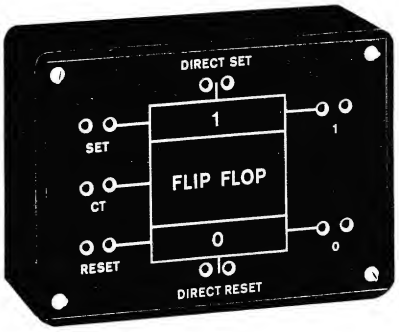
A complete understanding of the basic principles of Digital Logic, Boolean Algebra and arithmetic, decision making and control functions is vital in any computer education program.

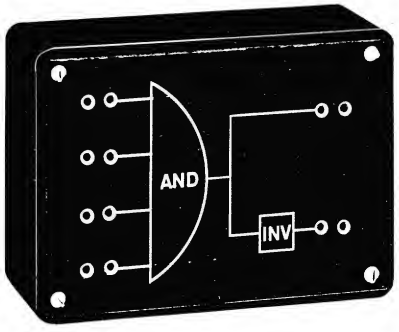
NORDAC II provides the means for presenting these principles in the most meaningful manner—by *performing* basic computer functions so that the student can easily understand the logical and mathematical concepts involved.

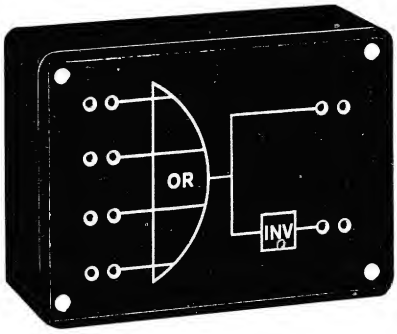
It uses basic computer building blocks to develop logic and arithmetic functions in *classroom demonstration* and/or *student experimentation.*

Individual modules are plugged into the control panel to *perform* basic computer operations, and to *visually describe* them in accordance with standard logic diagrams. The modules are logically interconnected with program wires. Symbols are large enough to be seen clearly in classroom demonstrations.

Over 100 demonstrations are contained in an accompanying manual. In addition to complete instructions for performing these demonstrations, the meaning and theory behind each are thoroughly discussed. Starting with simple ideas, the student is carried forward to complex computer functions. No previous knowledge of advanced mathematics or electronics is required.







NORDAC II demonstrations cover these topics:

DIGITAL LOGIC

Assertion and Negation of Statements.
Basic Logic Operators:
AND, OR, NOT.
The NOR.
The NAND.
The Inhibitor.
The Exclusive OR.
Multi-level Logic.
Functions of Two Binary Variables.

BOOLEAN ALGEBRA

Basic Postulates.
Commutative Law.
Distributive Law.
Associative Law.
De Morgan's Theorems.
Simplifying Theorems.
AND, OR, NAND, NOR Conversions.
Application of Boolean Algebra to Logic Equations and Computer Functions.

COUNTERS AND REGISTERS

The FLIP-FLOP.
The Binary Counter.
The Down Counter.
The Up-Down Counter.
8, 4, 2, 1 BCD Counter.
2, 4, 2, 1 BCD Counter.
Excess Three Counter.
Special Counts.
Decimal-Binary Conversion.
Binary-Decimal Conversion.
Binary Counter With Decoder.
The Ring Counter.
Bi-Quinary Counter.
The Shift Register.
Register Storage.
Register Transfer of Data.
Serial-Parallel Conversion.

COMPUTER ARITHMETIC

The Logic of Addition.
The Half-Adder.
The Adder.
Parallel Addition.
Serial Addition.
The Accumulator.
The Logic of Subtraction.
The Half-Subtractor.
The Subtractor.
Parallel Subtraction.
Serial Subtraction.
The Adder-Subtractor.
Complement Subtraction.

DECISION MAKING AND CONTROL

Comparators.
Recognition Gates.
Step and Operational Counters.
Time-Pulse Distributor.
Logical Control Operations.

NORDAC II is manufactured to the highest standards using solid-state components and printed circuits.

Each NORDAC II includes these component units:

CONTROL UNIT—Housed in a finished instrument case with cover—14″x24″x8″.

The Control Unit contains:

POWER SUPPLY—105-125 V., 60 Cycle, A.C.—Provides proper power to modules when they are plugged into any of 15 locations on the Control Panel. Includes a Power Switch, Power Indicator and Circuit Breaker.

LEVEL SWITCHES (4)—Provide Logical ONE or ZERO to be used as inputs to the Logic Modules.

INDICATORS (8)—Used to indicate output conditions of logic and arithmetic functions.

LOGIC MODULES—Total of Thirteen—3″x4″x1½″ each.

FLIP-FLOP (4)—Used as Storage Elements, Binary Counters, Shift Registers.

AND (4)—Logically AND's up to four inputs. Becomes a NAND when Inverted output is used.

OR (4)—Logically OR's up to four inputs. Becomes a NOR when Inverted output is used.

ADDER-SUBTRACTOR (1)—Performs Addition (or Subtraction) of two binary digits and carry (or borrow) from the previous stage. Output is the Sum (or Difference) and Carry (or Borrow). Selection of function is controlled electronically.

PRICE—$485.00, fully assembled and warranted, FOB Riverside, New Jersey.

Additional Logic Modules, to use in performing more complex demonstrations, are available in accordance with current price schedules.

Also available, the DIGITAL CIRCUIT MODULE—which provides the means to study the solid-state circuits of computer logic blocks by constructing them in *breadboard* fashion. This module is fully compatible with all other NORDAC II modules.

A suggested NDEA purchase

To order, write: **SCIENTIFIC EDUCATIONAL PRODUCTS CORPORATION**
30 EAST 42nd STREET • NEW YORK, NEW YORK 10017

SCIENTIFIC EDUCATIONAL PRODUCTS CORPORATION ■ 30 EAST 42ND STREET ■ NEW YORK 17, NEW YORK ■ TN 7-9480

We are proud to announce our new Nordac II Digital Computer Logic Trainer -- a worthy companion to our Minivac 6010 (the most widely used digital computer trainer).

Nordac II is fully-transistorized and was specifically designed as an extremely versatile and flexible digital computer logic trainer for use in classroom demonstrations and/or laboratory experimentation -- and at a reasonable cost.

In accordance with your request, we have enclosed complete information on Nordac II. Please feel free to contact us for further details or for answers to any questions.

Thanking you for your interest and looking forward to being of further service to you, we are

Sincerely yours,

Richard S. Greene
President

RSG:nb
Enc.